

REMARKS

By this amendment, claims 18, 30 and 33-35 has been cancelled and claims 36-45 are newly added. Accordingly, claims 36-45 are currently pending in the application, of which claim 36 is independent claim.

In view of the above amendments and the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Rejections Under 35 U.S.C. §112, second paragraph

Claim 34 stands rejected under 35 U.S.C. §112, second paragraph as being indefinite. In this response, claim 34 has cancelled. Thus, withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. §103

Claims 18, 30, 34 and 35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 5,259,881 issued to Edwards, *et al.* (“Edwards”) in view of U. S. Patent No. 5,198,694 issued to Kwasnick, *et al.* (“Kwasnick”) and further in view of U. S. Patent No. 5,578,520 issued to Zhang, *et al.* (“Zhang”). Applicants respectfully traverse this rejection because claims 18, 30, 34 and 35 have been cancelled. Thus, withdrawal of the rejection is respectfully requested.

Claims 18, 30 and 33-35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U. S. Patent No. 5,512 issued to Turner, *et al.* (“Turner”) in view of Kwasnick. This rejection is respectfully traversed because claims 18, 30 and 33-35 have been cancelled. Thus,

Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 30 and 33-35.

New Claims

In this response, claims 36-45 have been newly added, of which claim 36 is independent. Claim 36 recites “the apparatus sequentially forms the gate insulating layer, the amorphous silicon layer, the doped amorphous silicon layer and the metal layer are sequentially formed *without breaking a vacuum*”. An example of this feature is shown in Figs. 5 and 12 and their corresponding portions of the specification (i.e., page 7, line 21 to page 8, 4 and page 8, line 18 to page 9, line 3). Particularly, the specification describes “it is preferable that the substrate 100 is maintained in *a vacuum state* through out the entire process of depositing the four layers and not to be exposed to air” (Page 8, lines 2-4)

In the Office Action, the Examiner acknowledged Edwards and Turner fail to disclose that utilizing the chambers for forming the specific layers described in the claims. Regarding these missing features, the Examiner asserted that Kwasnick cures the deficiency from Edwards.

However, in Kwasnick, after forming the gate dielectric layer 28, the intrinsic amorphous silicon layer 30 and the n+ amorphous silicon layer 32 (see Fig. 3), the intrinsic amorphous silicon layer 30 and the n+ amorphous silicon layer 32 are patterned (see Fig. 4) prior to forming the metal layer 34 (see Fig. 5). Thus, the substrate must be transferred from the vacuum chamber to a photolithography equipment to perform masking and patterning process prior to forming the metal layer 34. As shown in Edwards and Tuner, to perform a photolithography process on a substrate, the substrate *must* leave the processing apparatus. Thus, the asserted combination of Edwards/Tuner and Kwasnick would not be able to form the layers without breaking a vacuum.

For these reasons, it is respectfully submitted that new claims 36-45 are patentable over the asserted combination of Edward/Tuner and Kwasnick.

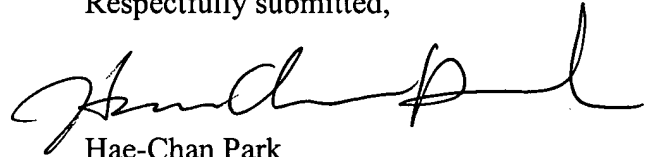
CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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